PCN107

MEASURING RISK FACTORS FOR NON-ADHERENCE USING PATIENT-REPORTED OUTCOMES IN STUDIES EVALUATING ADHERENCE WITH ORAL ANTINEOPLASTIC AGENTS: A 10-YEAR REVIEW

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OBJECTIVES: With oral antineoplastic agents (OAAs) becoming the mainstay of treatment for several cancer types, understanding risk factors for medication non-adherence is becoming increasingly important in oncology. Patient-reported outcome (PRO) instruments may provide valuable insight on barriers to medication adherence in the real world. This study sought to identify and describe key patient-reported risk factors for non-adherence measured in observational studies evaluating adherence with OAAs. **METHODS:** A targeted literature review was conducted to identify OAA adherence studies utilizing PROs and published between January 2004 and December 2014. Key data abstracted from each retained article included study design, cancer type, and all PRO instruments or study-specific questionnaires used. Domains measured by each PRO instrument and questionnaire were recorded to understand patient-reported risk factors measured. **RESULTS:** Of 100 articles reviewed, 11 studies met all study inclusion/exclusion criteria. Nine studies (82%) used at least one validated PRO instrument and 7 studies (64%) used at least one study-specific questionnaire to measure patient-reported risk factors for non-adherence. The most commonly used PRO instruments were the Beliefs about Medicines Questionnaire (BMQ; n=4) and the Satisfaction with Information about Medicines Scale (SIMS; n=3). Six studies (55%) used a validated PRO to measure health-related quality of life (HRQL); however, only the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) was used in more than one study. Overall, the most common domains measured by PRO instruments or questionnaires were knowledge about medication (n=7), beliefs about medication (n=6), HRQL (n=6), attitude toward disease (n=4), symptoms (n=3), and side effects (n=3). **CONCLUSIONS:** Risk factors for non-adherence are commonly measured by patient-report in observational studies evaluating adherence with OAAs. Further work is needed to clarify advantages and disadvantages of using specific PROs to measure relevant risk factors and determine if risk factors vary by cancer type.

PCN108

MEASUREMENT OF HEALTH STATE UTILITIES FOR RELAPSED OR REFRACTORY PERIPHERAL T-CELL LYMPHOMA BY USING TIME TRADE-OFF AND VISUAL ANALOG SCALE METHOD

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OBJECTIVES: To elicit health utilities for refractory or relapsed peripheral T-cell lymphoma (PTCL) using visual analog scaling (VAS) and time trade-off (TTO) methods, to examine the impact of age on TTO values, and to estimate power curves to convert VAS scores to TTO values. **METHODS:** Health state vignettes for four health states (complete remission, partial response, stable disease and progressive disease) and four treatment-related adverse events (mucositis, thrombocytopenia, anemia, neutropenia) were developed. Utility elicitation from 125 Koreans from the general public living in Seoul was conducted using VAS and TTO methods. Linear mixed regression and generalized linear mixed models were used to assess the impact of age on TTO values. Nonlinear regression was used to estimate power curves to convert VAS scores to TTO values. **RESULTS:** Complete remission was the most preferred health state (mean TTO value: 0.885), followed by partial response, 0.784; stable disease, 0.746; and progressive disease, 0.567. Treatment related adverse events were related to significant negative impacts. The smallest disutility was associated with mucositis (mean TTO disutility: -0.075). The largest disutility was related to neutropenia (mean TTO disutility: -0.107). Age was not a significant determinant of utility values. Health state (p-value < 0.001) and cancer experience (p-value = 0.025) had a significant impact on preferences. Two power functions (, were derived, where u = aggregated TTO values and v = aggregated VAS score. **CONCLUSIONS:** This study demonstrated that utility values and power curves for PTCL can be used in economic evaluations and decision making.

PCN109

UTILITIES FOR HEALTH STATES IN PATIENTS WITH RELAPSED/REFRACTORY NON-HODGKIN LYMPHOMA AND FACTORS INFLUENDING UTILITY VALUES

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OBJECTIVES: To elicit utility values for health states associated with relapsed/refractory non-Hodgkin lymphoma and compare utilities after adjusting for demographic and societal characteristics in South Korea's general public. **METHODS:** Health state 'vignettes' associated with a treatment for R/R non-Hodgkin lymphoma were developed and characterized as: complete response(CR), partial response(PR), stable(SD), progressive disease(PD), and treatment related adverse events(neutropenia, mucositis, thrombocytopenia, anemia; AE). Vignettes were valued by South Koreans using the time trade-off method. The health state vignettes combined information gathered from sources such as published literature, consultations with clinical specialists, and interviews with patients, which were used to develop health dimensions consistent with the EQ-5D. Utility values were summarized and compared by characteristics of interviewees. The influencing factors of utility values were estimated using mixed Beta regressions. Since the utility values for various health states were measured by a subject, subjects were used as a strata. The glimmix SAS procedure was used to determine factors influencing utility. **RESULTS:** A total 166 Korean were interviewed. The subjects were aged 46(±10.6) years old with a near even gender split. Mean utilities were CR;0.89(±0.08), PR;0.79(±0.13), SD;0.75(±0.12), PD;0.45(±0.16), AE-neutropenia;0.70(±0.17), AE-mucositis;0.79(±014), AE-thrombocytopenia;0.77(±0.14), and AE-anemia;0.79(±0.13). Utility values for PR and PD were significantly different between males and females (p=0.0135 and p=0.047, respectively). The treatment responses and AE were significant factors in reducing utility values. The ratios of expected utility to disutility (=1-utility) in PR, SD and PD were 0.47, 0.38, and 0.13 times lower than those of CR, respectively. The ratios in AEs(neutropenia, mucositis, thrombocytopenia, and anemia) were 0.45, 0.51, 0.46, and 0.51 times lower than those of CR, respectively. **CONCLUSIONS:** This study found that patients' quality of life was significantly deteriorated by relapsed/refractory non-Hodgkin lymphoma. It is important to provide an appropriate treatment to improve quality of life.

PCN110

MAPPING UTILITY SCORES FROM EUROPEAN ORGANIZATION FOR TREATMENT OF CANCER CORE-30 QUESTIONNAIRE SCORES (EORTC QLQ-C30) IN RELAPSED MULTIPLE MYELOMA

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OBJECTIVES: To map patient-reported EORTC QLQ-C30 scores from the ASPIRE trial to EQ-5D utility index scores after identifying mapping algorithms from published literature. ASPIRE is a randomized, open-label, phase 3 trial, which evaluated the safety and efficacy of carfilzomib with lenalidomide and weekly dexamethasone compared with lenalidomide and weekly dexamethasone in patients with relapsed multiple myeloma. **METHODS:** We searched Medline, Embase, NHSEED, CENTRAL, DARE (January 2008 through September 2014) and conference proceedings (2010 to 2014) with the terms, EORTC, QLQ-C30, map, mapping, cross walk, translate, translation, algorithm, or mapping algorithm. Six articles reported mapping algorithms in a cancer population; relevant detailed information was available in four publications and extracted. Algorithms were implemented with ASPIRE data using regression modeling techniques including ordinary least squares (OLS) at domain and item levels, response mapping, and 2-part OLS model at item level where separate regressions were applied for low and high average functional scale domain scores. Utility scores at baseline in the ASPIRE trial population were estimated with UK tariffs from six algorithms. **RESULTS:** Mean utility at baseline varied by algorithm and ranged from 0.59 (sd = 0.27) (Versteegh 2010, 2-part OLS model) to 0.71 (0.20) (Proskorovsky 2014; full OLS Model). The range of scores (i.e. min, max) produced from the algorithms varied considerably; as narrow as 0.06 to 1.05 (Proskorovsky 2014; full OLS model), and as broad as (-0.43) to 0.98 (Longworth 2014; OLS model). **CONCLUSIONS:** The mapping algorithms yielded stable average estimates and deviations. Selection of the better fitting model will involve congruence between modeled estimates and the range of utility values estimated for the UK general population (-0.594 to 1.00), utility scores reported elsewhere from similar subjects and clinical judgment with respect to patient characteristics in the ASPIRE trial.

PCN111

EVAUATION OF CORCORDANCE BETWEEN PATIENT REPORTED OUTCOMES (PROS) AND CLINICIAN REPORTED OUTCOMES (CROS) IN PATIENTS WITH METASTATIC BRAIN DISEASE

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OBJECTIVES: To explore the degree of agreement between PRO, time –trade-off (TTO) utility and CROs in metastatic brain disease patients- neurocognitive function (NCF), Karnofsky performance status (KPS) and quality of life **METHODS:** We retrospectively analyzed secondary data from 96 brain disease patients (57 randomized and 39 non-randomized metastatic) who completed tests to determine TTO utility with three time horizons (1, 5, and 10 years), NCF, KPS, quality of life (Functional Assessment of Cancer Therapy–Brain [FACT-BR]) and symptoms (MD Anderson Symptom Inventory–Brain Tumor [MDASI-BT]). Multiple linear regression analyses were used to explore the relationships between TTO utility and other outcome variables. **RESULTS:** The CROs significantly associated with TTO utility were the FACT-BR (p-value<0.01 for 10- and 5- year TTO utility and 0.021 for 1-year TTO utility respectively) and the MDASI-BT (sleep) scores (p-value = 0.045 and 0.034 for 10- and 5- year TTO utility respectively). However the associations found were not strong. The NCF and KPS scores were not significantly associated with TTO utility. **CONCLUSIONS:** None of the functional scores used in metastatic brain disease explain patients' decisions to trade time for better quality of life. Quality of life scores are significant predictors of TTO utility, but they have only a limited impact on patients' decisions. Therefore it is essential to use PROs t and incorporate patients' perspectives of their symptoms and care and to complement the traditional CROs.

PCN112

USING FACT DATA TO PREDICT PREFERENCE-BASED UTILITY MEASURES FOR PEOPLE WITH MALIGNANT MELANOMA: A REVIEW OF THE EVIDENCE

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OBJECTIVES: To identify a published statistical relationship suitable for predicting UK specific preference-based utility scores (EQ-5D, SF6D or HUI) from FACT data (FACT-BRM, FACT-G or FACT-M) in individuals with malignant melanoma. **METHODS:** A range of health and social science databases were searched using a keyword strategy with terms relating to the population (people with malignant melanoma) and both the relevant FACT instruments (FACT-G, FACT-M, FACT-BRM) and the generic preference-based instruments (e.g. EQ-5D, SF-6D, HUI3). In addition to the keyword searches, speculative searches using internet search engines and citation searching and reference list checking were undertaken with no restriction by date, language or study design. Any study which provided a statistical regression model describing the relationship between one (or more) of the stated FACT and preference-based measures in patients with malignant melanoma were included in the review. Identified studies were appraised using a checklist for the reporting standards of statistical regression models. **RESULTS:** A total of 19 studies were identified from the literature searches, increasing to 27